

AUDIONET

DNA I

Digital Network Amplifier

User's Manual

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1 **Preface**

The Audionet Team congratulates you on your purchase of this unit.

Audionet components are no marketing products, they are authentic. Conceived and developed with scientific inspiration, professional engineering expertise and a passion for achieving the perfect sound. They are unique creations designed to inspire musical enjoyment and have an excellent reputation amongst all connoisseurs throughout the world. Each and every one of our precision-manufactured devices is individually crafted at our Bochum works by our experienced and passionate workforce.

But before you start listening to your new Audionet DNA 1, please read this manual carefully so you are able to use and enjoy all functions of this unit without drawback on music quality.

1.1 *Included*

Included you will find the following items:

- The stereo network amplifier DNA 1
- The user's manual
- one standard mains cord
- WLAN antenna

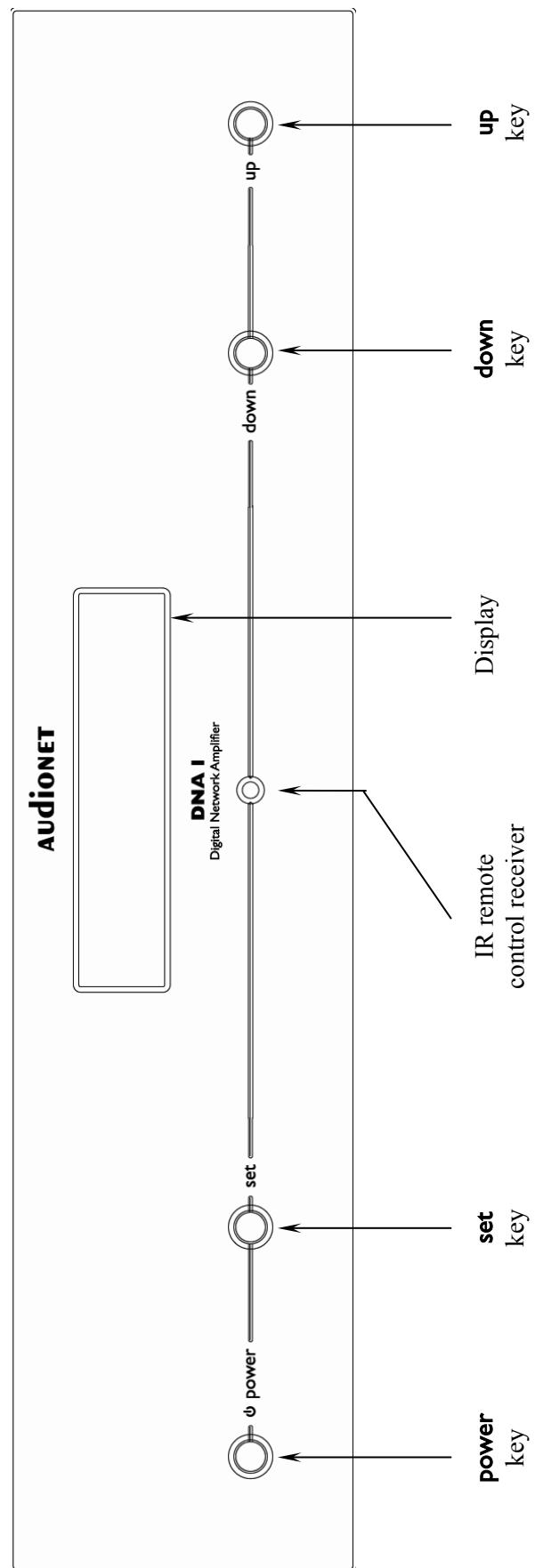
1.2 *Transport*



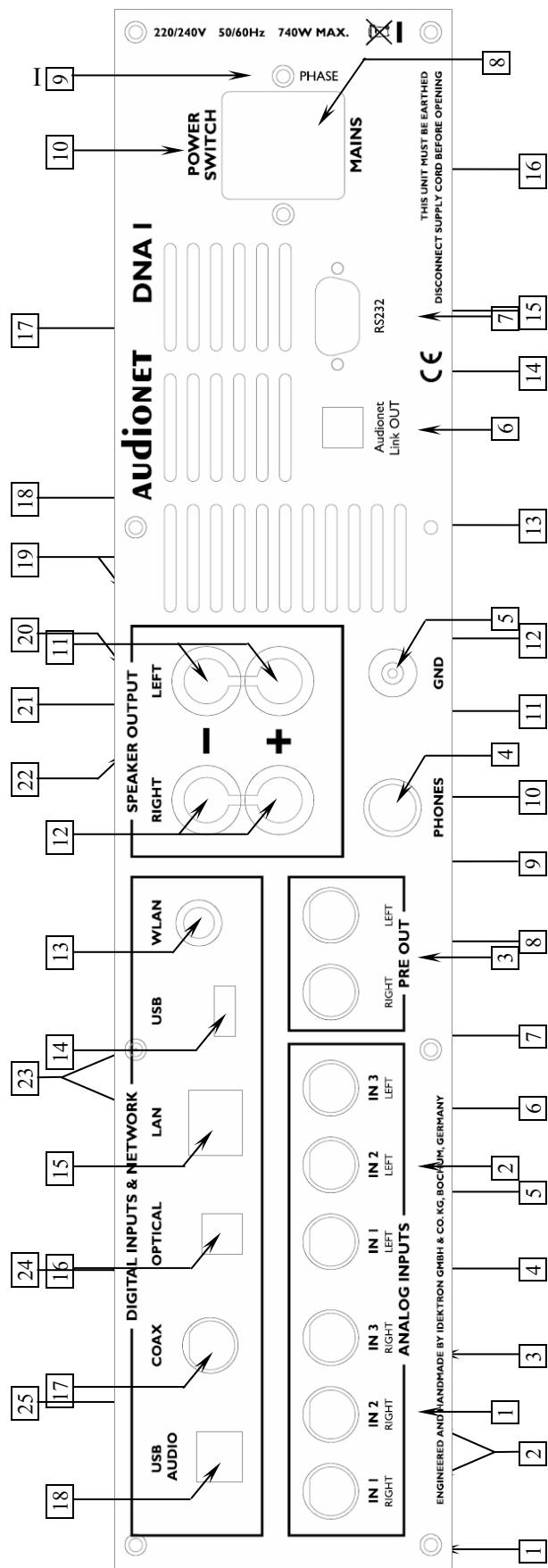
Important

- Please transport the DNA 1 only in the included package.
- Always use the provided cloth bag to prevent scratches on the casing
- Please allow the DNA 1 to adapt to the climatic conditions in your listening room before you switch on the unit for the first time after transport.

2 Overview front panel



3 Overview back panel



- 1 Cinch input no. 1-3, right channel
- 2 Cinch input no. 1-3, left channel
- 3 Preamplifier output **PRE OUT**, left/right
- 4 Headphones output
- 5 additional earth connector
- 6 Audionet Link output **LINK OUT**
- 7 Serial control port RS232
- 8 Mains input
- 9 Marking mains phase
- 10 Mains switch
- 11 Speaker output left
- 12 Speaker output right
- 13 Connector WLAN antenna
- 14 USB connector
- 15 Ethernet connector LAN
- 16 Digital input optical
- 17 Digital input electrical
- 18 USB-Audio Input

4 Installation and power supply



Important

- During connecting and removing of sources or amplifiers to the DNA 1 all units of your audio system have to be switched off to prevent damage of the DNA 1 or any of the other connected units.
- Please make sure that all cables are in absolute best conditions! Broken shields or short-cut cables could damage the DNA 1 and/or any other connected unit.

4.1 Placement



Important

- It is recommended to place the DNA 1 into a high quality rack or onto a stable table.
- Do not expose the unit to direct sunlight.
- Do not cover the ventilation slots.
- Do not place the DNA 1 in close range to heat sources like radiators.
- Do not place the DNA 1 on top of other units, especially not on top of power amplifiers, preamplifiers or similar devices that produce heat. Both units could suffer damage from thermal overload.
- Do not place other units on top of the DNA 1. Both units could suffer damage from thermal overload.
- Do not use the unit in places where it is exposed to vibrations.
- Do not place the unit close to loudspeakers or into the corner of a room where it is exposed to high levels of sonic energy, which might reduce the sound quality of the unit.

4.2 Mains connection

The mains input **[8]*** is on the back panel of the DNA 1. To connect the device to mains use the included mains cord. If you prefer to use a different power cord make sure that it meets the specifications for your home country.



Important

- The electrical specifications of your home country must meet the electrical specifications printed onto the back panel.

*see numbers in section "3 - Overview back panel" on page 88.

- The DNA 1 is a Class I unit and must be earthed. Please ensure a stable earth connection. Phase (hot pin) is marked on the back panel **phase [9]**.
- If you connect the mains cord please make sure that the mains switch **[10]** on the back panel is switched off.
- Never pull the mains plug while the DNA 1 is switched on! Before you pull the mains cord off its socket **[8]** on the back panel, power down the unit to stand-by mode using **power** key, and switch off the unit using mains switch **[10]**.

Only in cases of extended absence – like vacations – or if massive trouble on the mains power grid is to be expected you should switch off the DNA 1 from the mains using mains switch **[10]**. Then, to disconnect the unit completely from mains power grid, pull the mains plug.



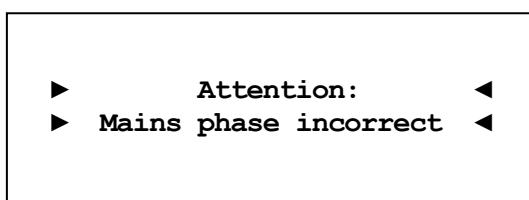
Tip

- The use of high quality mains cords can improve sound quality. Ask your local dealer for more information.

4.3 *Orientation of mains plug*

The correct polarization of mains is important for reasons of audio clarity and stability. Please connect the mains cord so that the hot pin of the wall outlet is connected to the pin of the mains input **[8]** marked **phase [9]**.

Your Audionet DNA 1 is able to detect a wrong polarization of the mains plug during start-up. If the message



appears in the display, switch off the unit and flip the mains plug in the wall outlet (see section "**6.1.3 - Mains phase detection**" on page 19).

5 Inputs and outputs



Important

- During connecting and removing sources or amplifiers to the DNA 1 all units of your audio system have to be switched off to prevent damage of the DNA 1 or any of the other connected units.
- Please make sure that all cables are in absolute best conditions! Broken shields or short-cut cables could damage the DNA 1 and/or any other connected unit.

5.1 Audio inputs

5.1.1 Analog inputs

The DNA 1 is equipped with three unbalanced cinch inputs. The connectors for left channels **[1]*** and right channels **[2]** are mounted separately.

Please connect the left and right input of the same number printed on the back panel of the DNA 1 to the corresponding output of the source you would like to connect to the DNA 1.

5.1.1.1 Optional phono input

The DNA 1 can be upgraded with a phono preamplifier. Use input **IN I** **[1]**, **[2]** to connect the turntable. Please connect the ground wire of the turntable to the terminal **GND** **[5]**.



Important

- If the DNA 1 is equipped with the optional phono module, input **IN** **[1]**, **[2]** may only be used to connect a turntable.
- Never use **IN I** **[1]**, **[2]** as input for By-Pass mode, if the optional phono module is installed.
- If the DNA 1 is equipped with the optional phono module, it has to be registered in the system in order to be configurable. For further information see section "**8.2.6 - Phono Card**" on page 39.

5.1.2 Digital input

Connect your digital sources to the electrical (coaxial) digital input **COAX** **[17]** or to the optical (TosLink) digital input **OPTICAL** **[16]**.

* see chapter "**3 – Overview Back Panel**" on page 10.

5.2 Audio output

5.2.1 Speaker terminals

Connect your speakers to the gold plated terminals **Speaker Output Left** **11** and **Speaker Output Right** **12** on the back panel of the DNA 1. You can use banana plugs or spades as well as simple cable ends. Look out for the correct connection of your speaker cables. Usually, the terminals of your speakers are marked + and -. The DNA 1 uses the same marks.



Note

- Wrong speaker polarization will result in severe loss of sound quality.
- In case you would like to bi-wire your speakers please insert the cable to the tweeters from the rear using banana plugs and mount the cables to the bass speakers from the side. In doubt please ask your dealer for assistance.



Important

- **Although the DNA 1 has an effective protection system to prevent damage to the circuits, switch off the unit while working on the speakers and/or audio cables.**
- **The nominal loudspeaker impedance should be at least 4 Ohms or higher.**
- **Never use force or tools tightening the terminal screws.**

5.2.2 Preamplifier output

The DNA 1 is equipped with one pair of RCA preamplifier outputs **PRE OUT** **3** to connect e.g. an additional amplifier or one or two subwoofers. You can also use the RCA connection **PRE OUT** **3** with high quality cable (e.g. Audionet C100) for bi-amping.

The preamplifier output **PRE OUT** **3** is always active, unfiltered and passes the volume control of your DNA 1.

5.2.3 Headphones Socket

A 6.3 mm headphones socket **HEADPHONES** **4** is located at the rear of your DNA 1. The signal at this socket can be switched on and off to allow the headphones to be plugged in permanently. Switching is easily done in the system menu, please refer to "**8.2.1 - Headphones**" on page **33**.

5.3 Other connections

5.3.1 Network, USB, WLAN

The Ethernet port **LAN** [15]^{*} is a standard RJ45 socket for network cables (Cat-cable, 10/100 Mbit BASE-T).

The WLAN port **WLAN** [13] uses a SMA connection to attach the provided WLAN antenna. With the articulated joint the antenna can be turned into two directions.

The USB port **USB** [14] is a TYPE-A socket (USB 2.0) for external hard drive, USB sticks etc.



Note

- We recommend using a wired network connection for best data transfer rate and to provide high stability in control with our software.

5.3.2 USB Audio

The USB Audio port **USB AUDIO** [18] is a mini-USB TYPE-B-socket. With the USB Audio connection you are able to connect your DNA 1 with a USB cable directly to a PC. Thus you can use your DNA 1 as the sound device / playback device for your PC. Playback operates in asynchronous mode, that means the DNA 1 uses its own clock and you are able to enjoy your music without diminishing sound quality.

For using USB Audio the required driver needs to be installed on your PC. For Apple devices using Mac OS X 10.6.4 and higher a suitable driver is included within the operating system. To receive the driver for Windows based systems please contact us via service@audionet.de.



Note

- The driver is packed into a zip-file. To install the driver unpack the zip-file into a folder of your choice. Then open the chosen folder and start the installation process executing the file *setup.exe*.
- During the installation process all occurring security warnings can be confirmed with 'OK'.
- During the installation process your Audionet device has to be connected with your PC via an USB cable.
- After successful installation you can choose your DNA 1 as the sound device / playback device of your PC. For configuration open the system preferences of your PC.
- Pay attention to the length of the USB cable. If the cable is too long you might diminish sound quality and / or experience dropouts during playback.

^{*}see number in section "3 - Overview back panel" on page 10.

5.3.3 Audionet Link

For your convenience, the DNA 1 can switch on/off all other Audionet units (e.g. power amplifiers) connected via Audionet Link by a simple touch on the remote control or the **power** key on the front panel.

You only need a simple optical TosLink cable. Connect the Audionet Link output **Link OUT** [6] of your DNA 1 to the Audionet Link input of the unit to be controlled.

The DNA 1 is equipped with one Audionet Link output **Link OUT** [6], which is controlled depending on the settings for the headphones output. Please refer to section "**8.2.1 - Headphones**" on page 33.



Tip

- Audionet source units and power amplifiers are usually equipped not only with an Audionet Link input, but additionally with an Audionet Link output to connect further Audionet devices to be controlled via Audionet Link in a daisy chain. Connect this Audionet Link output to the Audionet Link input of the next Audionet unit using a simple optical TosLink cable allowing you to switch on/off your complete Audionet system by your Audionet amplifier DNA 1.

6 Usage

All functions of the DNA 1 are microprocessor controlled. This guarantees highest precision, exclusive functions, easy handling and protection against operating errors.

6.1 *Basic operations*

6.1.1 **Powering up**

First of all, please make sure your DNA 1 is connected correctly to your signal sources, power amplifier(s) and mains (see section "*4 - Installation and power supply" on page 11* and "*5 - Inputs and outputs" on page 13*).

The DNA 1 is a stand-by unit. Please operate the mains switch **[10]** on the back panel. The display shows a welcome message for a brief moment. After that the DNA 1 is in stand-by mode.

Only in cases of extended absence (like vacations) or if massive trouble on the mains power is to be expected (e.g. thunder storms) it is recommended to disconnect the DNA 1 from the mains. While the DNA 1 is in stand-by mode, operate mains switch **[10]** on the back panel. The display will go dark. To disconnect the DNA 1 from mains completely, you have to pull the mains cord off the mains jack **[8]**.

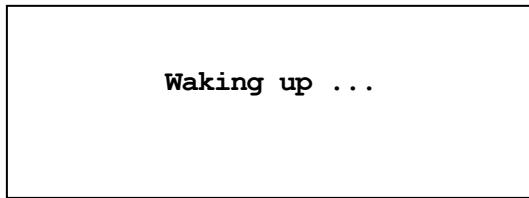


Important

- **Before you switch off the DNA 1 from mains, power down and discharge completely all units connected to the outputs of the DNA 1.**

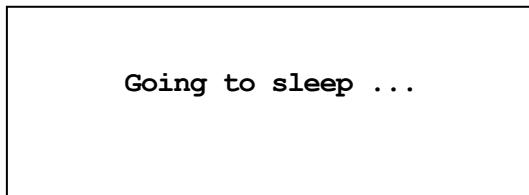
6.1.2 Switching on and off

To power up the DNA 1 from stand-by mode, press the **power** key on the front panel. The DNA 1 issues the message:



In case the mains plug has the incorrect polarization a warning will appear in the display (see section "*4.3 Orientation of mains plug*" on page 12). After that the unit is in normal operating mode and ready to use.

If you would like to switch off the unit, please press the **power** key on the front panel. The display shows the message



and the unit enters stand-by mode.

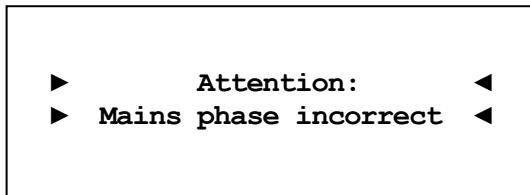


Note

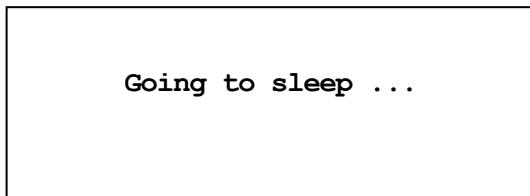
- Of course, you may switch on/off the DNA 1 with the Audionet System Remote Control. For detailed information please refer to section "*7 - Audionet system remote control*" on page 28.

6.1.3 Mains phase detection

The correct polarization of mains is important for reasons of audio clarity and stability. Please connect the mains cord with the hot pin of the wall outlet to the pin marked **phase** [9] of the mains input [8] on the back panel. The DNA 1 recognizes the incorrect polarization of the mains plug automatically. Right after switching on the unit from stand-by mode by pressing the **power** key on the front panel the following message will appear in the display in case the mains polarization is incorrect:



If you are alerted by the above message, switch off the unit by pressing the **power** key. Please wait until the display no longer reads:



Disconnect the DNA 1 from mains by operating the mains switch [10]. Now pull the mains plug and re-insert it into the mains socket rotated by 180°.

If you switch on the unit again, the warning shouldn't appear any longer.



Important

- If the DNA 1 issues the mains polarization warning or no warning at all for both positions of the mains plug, check the connection to earth of your mains socket and mains cord. **You have to ensure a stable connection to earth for the mains phase detection of the DNA 1 to work correctly!**

6.1.4 Using Audionet Link

Your DNA 1 is equipped with an Audionet Link output **Link OUT** 6 allowing you to switch on/off further Audionet units (e.g. power amplifiers, CD player or tuner) connected via Audionet Link (also see section "[5.3.3 - Audionet Link" on page 16](#)).

If the rest of your Audionet system is connected to your DNA 1 via Audionet Link, all linked units will be automatically switched on/off as soon as you switch on/off your DNA 1 using the **power** key on the front panel or the Audionet System Remote Control.



Note

- Please read section "[5.3.3 - Audionet Link" on page 16](#) and section "[8.2.1 - Headphones" on page 33](#). Also, consult the user's manual of your Audionet components connected via Audionet Link for further information.
- If you use Audionet Link to switch off other devices, please wait until everything is in stand-by mode before switching on again.

6.1.5 Control elements on the front panel

The front panel has four keys to control the DNA 1 (see section "[2 - Overview front panel" on page 9](#)). With these keys you can control all functions as well as all setup options to adjust the unit to your preferences (see section "[8 - Device setup" on page 31](#)).

power	Use key to switch on/off the unit (see section " 6.1.2 - Switching on and off" on page 18>).
set	Press key shortly to change input channel (see section " 6.2.4 - Input selection" on page 25). Within a menu press shortly to open a subfolder or to confirm and save an adjustment. Press the key for longer than two seconds to get into system menu (see section " 8 - Device setup" on page 31). Within a menu press long to step back and open the superior folder or to dismiss an adjustment without saving.
down	Push key to reduce volume, select previous input channel (see section " 6.2.4 - Input selection" on page 25") or change an option of the setup menu (see section "8 - Device setup" on page 31).
up	Push key to increase volume, select next input channel (see section " 6.2.4 - Input selection" on page 25") or change an option of the setup menu (see section "8 - Device setup" on page 31).

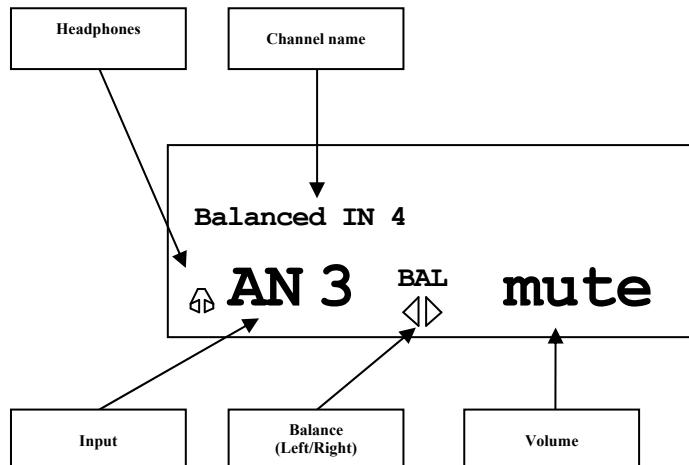
6.2 Detailed operations

6.2.1 Display

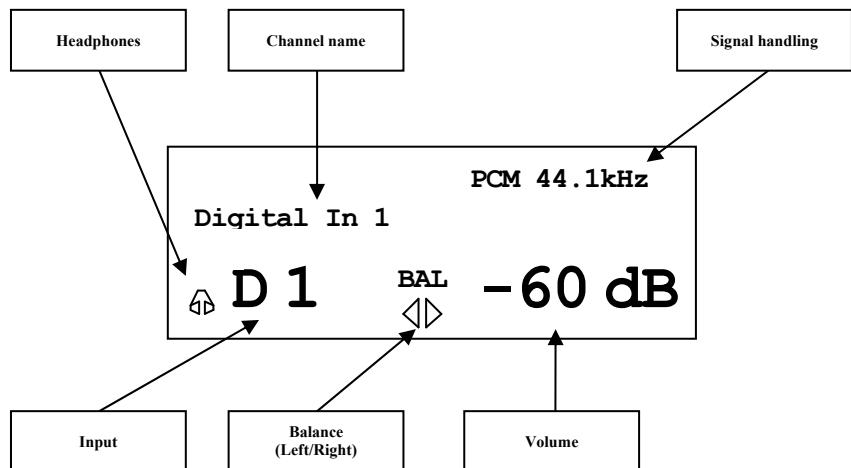
The display provides the following information in the normal operating mode.

Depending on which channel you chose, you get different information. If there is more information to show you can switch display pages with the **Info** key on system remote control *Harmony Ultimate One* (see section "**7.1 - Key Assignment Harmony Ultimate One**" on page 29). You will need it especially for the NET input channel (see section "**6.2.1.3 - NET input**" on page 22). The following illustrations will show you the differences between the input channels. Your display could be different, because of your selected system adjustments.

6.2.1.1 Analog input channel

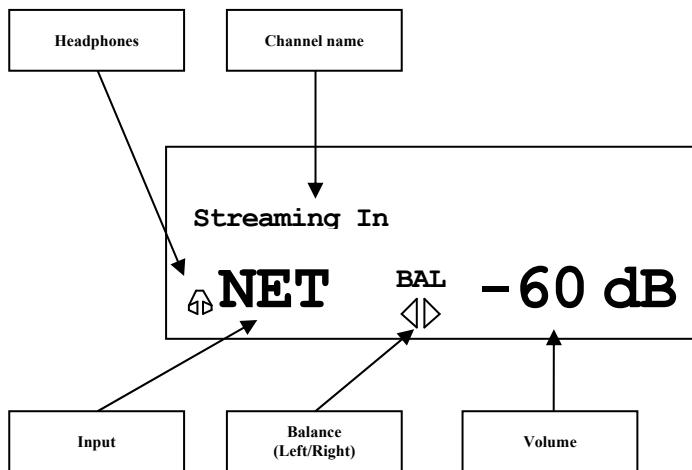


6.2.1.2 Digital input channel

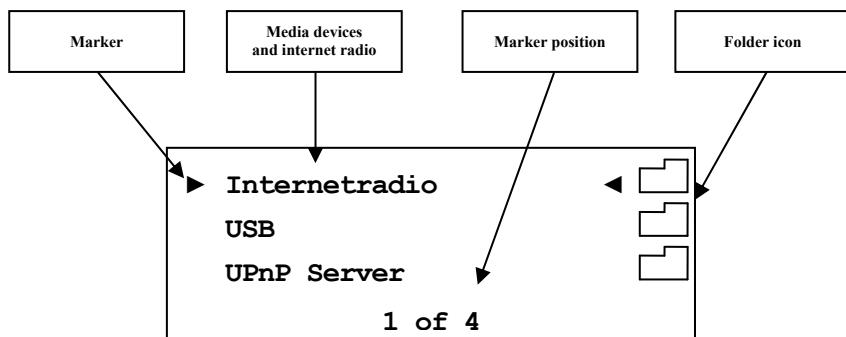


6.2.1.3 NET input

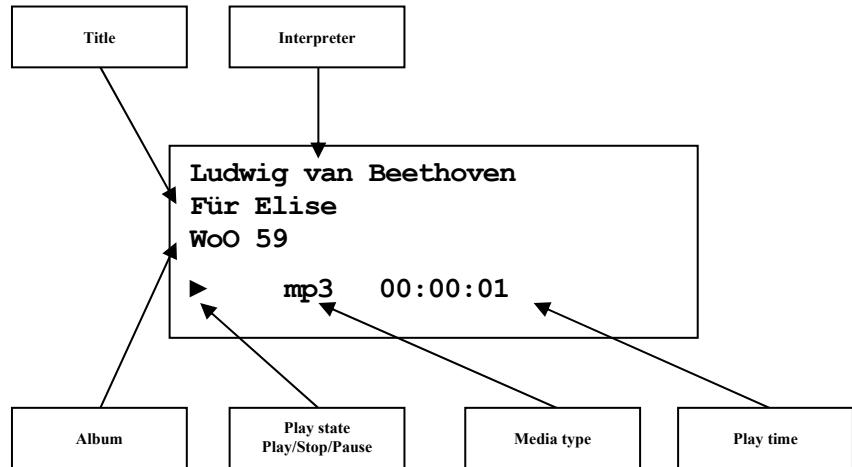
- View 1:



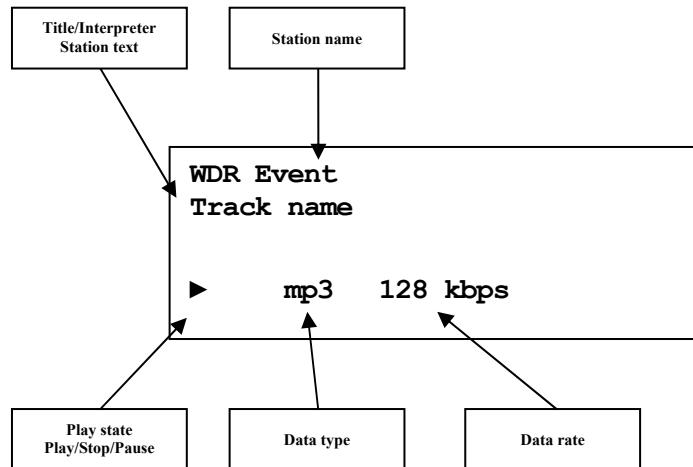
- View 2:



- View 3a (Play from UPnP or USB):



- View 3b (Play from internet radio station):



6.2.2 Volume control

When the DNA 1 is in normal operating mode use the keys **up** and **down** on the front panel to adjust the volume. **up** to increase, **down** to decrease the volume. The volume control of the DNA 1 runs in a range from **-80dB** (quiet) to **+10dB** (very loud) in real 1 dB steps in relation to the level of the input signal. You can also control the volume with your System Remote Control or the software Audionet RCP.

6.2.3 Muting



Note

- The muting function is available with the Audionet System Remote Control (see section **"7.1 - Key Assignment Harmony Ultimate One" on page 29**).
- You can also use software Audionet RCP and the Apps “aMM” and “iMM” to mute your DNA 1

Press key **[M]** of the Audionet System Remote Control to mute or un-mute your DNA 1.

Just as well as the input selection, the DNA 1 uses soft muting, i.e. volume is stepped down gently to -80 dB, and then the outputs are switched off. The display informs the user of a muted unit with the text **MUTE**. Even if the dim level is set to **Off**, the text is displayed.

To un-mute the DNA 1 press key **[M]** again. Here as well, the volume is stepped up gently to its original level after switching on the outputs.



Note

- While the unit is muted, you may of course select a different input channel. But the DNA 1 will stay muted until you press the key **[M]** again to un-mute and restore the original volume level.
- If you turn up the volume by using the **up** key or **[Vol+]**, while the DNA 1 is muted, the muting function will be deactivated and the new volume level set.

6.2.4 Input selection

Push the **set** key on the front panel once for less than two seconds to enter the input selection menu. Then select the desired input channel with the keys **up** and **down**. In the display you see the selected input channel, channel number and your chosen channel name. Press **set** to apply the channel switching. Overview of DNA 1 input channels:

No.	Inputs	Signal	see 3 - Overview back panel on page 10
1	D1	Digital (electrical)	Digital Inputs IN 1 [17]
2	D2	Digital (optical)	Digital Inputs IN 2 [16]
3	NET	Stream, USB, Internetradio	Network [15] [14] [13]
4	USB	USB Audio In	USB Audio [18]
5	AN1	Unbalanced Line/ Phono	Analog Inputs IN 1 [1-2]
6	AN2	Unbalanced Line	Analog Inputs IN 2 [1-2]
7	AN3	Unbalanced Line	Analog Inputs IN 3 [1-2]

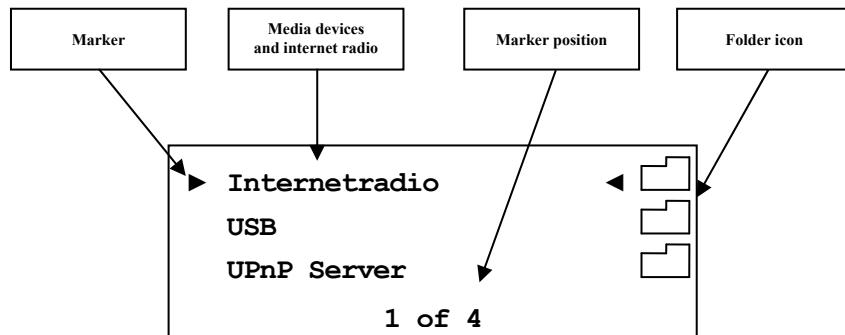
The DNA 1 features a soft input selection. During the switching of inputs, first the volume is stepped down to –80 dB, followed by switching off the outputs. Now the input section switches to the new input channel. Afterwards the outputs are switched on again, and finally the volume is stepped up to its original level.



Note

- Leave the input selection function by holding down the **set** key longer than 2 seconds or wait a few seconds.
- Using the Audionet System Remote Control, select an input channel by simply pressing the corresponding key (see section "**7.2 - Using the touch screen" on page 30**), or use the keys **Ch+** and **Ch-** to switch to the next or previous input channel without using the **Select Input** function.
- A '*' besides the channel name indicates the input which is selected as By-Pass Channel.

6.2.5 NET input



6.2.5.1 Internet radio

With the internet radio service *vTuner* it is possible to select your favourite radio stations from a steadily growing number of worldwide stations. You have to register with an account at *vTuner* to save your favourite stations and to receive personalized recommendations. Beforehand a stable network environment should be set up for your Audionet device (see section "**8.3 - Network setup" on page 42**).

To register an account, open the website <http://audionet.vtuner.com>. You will be going to visit this address every time you wish to edit your favourite radio stations. As long as you do not have registered an account with your Audionet device, you have to click on *Register Here* right below the login. Additionally you will be requested to enter your E-Mail address, to choose a personal passphrase and to enter an access code. There are two possibilities to find your access code. With the system remote control *Harmony Ultimate One* select the NET input. Select the first menu item **Internet Radio (1 of 5)** using **OK** key. Navigate to menu entry **Get Access Code (13 of 14)**. Confirm with **OK**. Your access code consists of eight digits and is now shown in line 3 (**3 of 3**). Note down this code and enter it in the registration window within your browser.



Important

- Once you obtained your access code using system remote control *Harmony Ultimate One*, note down the shown code and leave the remote control aside. Proceed with the registration process. Otherwise every time you will enter menu item **Get Access Code (13 of 14)** a different code will be created for the MAC-address of your Audionet device.

The second possibility to receive the access code is to use the software Audionet RCP. With a stable connection established to your Audionet device, you might select NET input and open path "Home > Internet Radio > Get Access Code" within the UPnP tab. The code consists of eight digits and can be found in the third line.

As soon as you registered an account for your Audionet device, you are able to log in to the website <http://audionet.vtuner.com> and edit your favourite radio stations. Furthermore you are able to add radio stations to your favourites by right-clicking on the station name within software Audionet RCP.

6.2.5.2 USB

Connect your USB device to the DNA 1 and wait until it appears in the display. Supported are all FAT and FAT32 formatted devices. Your USB device is shown in top level of NET input. You can navigate through your folder structure with directional pad on your system remote control (see section "**7 - Audionet system remote control " on page 28**).

6.2.5.3 UPnP server

The easiest way to play music from an UPnP server is to use the software Audionet RCP or Apps aMM for Android or iMM for iOS.



Note

- Look out for separately available user's manual to our software Audionet RCP. You can find it on our website www.audionet.de.

If you want to use your System Remote Control, it is the same way to navigate through as shown above in section internet radio and USB.

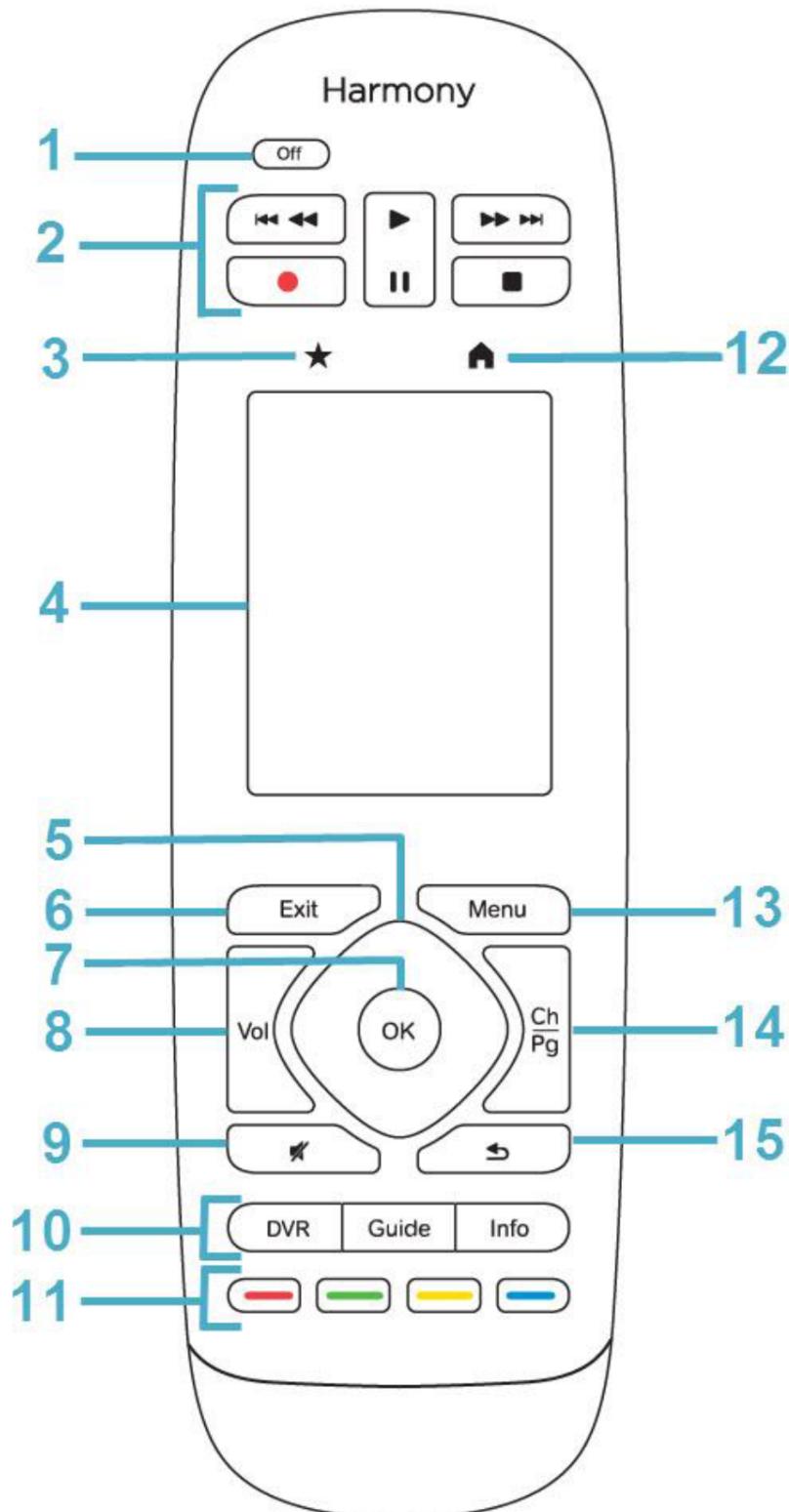
6.2.6 USB Audio

The USB Audio connection allows a direct connection of your DNA 1 to your PC. Audio files can then be played with your favorite software. The DNA 1 serves as sound device / playback device.

For further information see section "*5.3.2 - USB Audio*" on page 15.

7 Audionet system remote control

Every function of the DNA 1 is accessible via the Audionet system remote control *Harmony Ultimate One*. Additionally, up to 14 other devices can be controlled by the *Harmony Ultimate One*.



7.1 Key Assignment Harmony Ultimate One

Nr.	Taste	Funktion
1	Off	To power off the actually used activity. Long Press (>10Sek) will power down/up the remote control itself
2	Play Pause Stop	Starts, pauses or stops the playpack of titles
2	REC	Not used
2	◀▶	Short press: skip forward / backward
2	◀▶	Long press: fast forward / backward
3		Favourites: see manual Logitech; not relevant for DNA1
4		Touchscreen, Functions are labeled
5		Cursor cross-hair surroundig the OK-button, it is used to navigate through menu of DNA 1
6	Exit	Moves back in menu
7	OK	Confirms a selection
8	Vol + Vol -	Reduces or raises the volume
9		Mutes the volume
10	DVR Guide Info	Only info-button is used to switch between different display modes.
11		Colored buttons: not used
12		Home: shows activities
13	Menu	To enter the system menu to setup all device parameters.
14	Ch	Short press up/down switches the input channel
14	Pg	Long press up/down switches to the next screen page
15		Back

You will find help for setting up your Logitech Harmony Ultimate One on the internet on Logitech's webpage:

www.logitech.com/support/harmony-ultimate-one
<http://support.myharmony.com/en/article.htm?faqid=s-a-2166>

Download the user manual from here:

<http://cdn-www.myharmony.com/files/harmonyultimateone-usermanual-en.pdf>

7.2 Using the touch screen

Tap on the  symbol above the touch screen of your *Harmony Ultimate One* to get a list of all your Activities. Tap now on the  symbol on the lower right and then on the key **Devices**. The screen will give you a list of all programmed devices to be controlled by your *Harmony Ultimate One*. Scroll through the list with an up or down wipe and press then the key **DNA1**, in order to control your DNC with the *Harmony Ultimate One*. The **Device** mode gives you access to all remote control commands your DNC understands. The following will discuss these commands in detail.



Important

- During everyday use, you should never need to use the Device Mode of your *Harmony Ultimate One*, but control the DNA 1 (and other devices of your audio setup) by customizing your Activities. For detailed information on how to customize and use Activities on your *Harmony Ultimate One* please consult the separate user manual for *Harmony Ultimate One*.

Key	Function
123	Opens the numeric key pad
Power Toggle	Switches the unit on or off
Power On	Switches of the unit on
Power Off	Switches the unit off
Digital In	Direct selection of the coaxial digital input
Optical In	Direct selection of the optical digital input
Streaming In	Direct selection of the streaming input
USB Audio In	Direct selection of the USB Audio input
Phono In	Direct selection of the analogue input 1
Line In 2	Direct selection of the analogue input 2
Line In 3	Direct selection of the analogue input 3

8 Device setup

To adjust the DNA 1 to your preferences, please use the setup menu. You can control the menu with the keys on the front panel of your DNA 1 or with your remote control. For more comfortable adjustment use our software Audionet RCP. You only need to integrate your DNA 1 to your network (see section: *"8.3.10 - Example for Network setup" on page 53*).

To control your DNA 1 with front panel keys, use **set**, **up** and **down**.

set holding the key pressed for more than 2 seconds opens the system menu. If you hold again you leave the menu without saving, you cancel. Short push saves/applies a menu item or you switch into marked menu item.

up, **down** are used to select setup menu items and change.

For easier control you can use the directional pad on your System Remote Control *Harmony Ultimate One* (see section *"7 - Audionet system remote control" on page 28*).

To setup your DNA 1 very comfortable, please use our software Audionet RCP. You can control everything with mouse and keyboard. You can see everything on your computer display (see also Audionet RCP user's manual).



Note

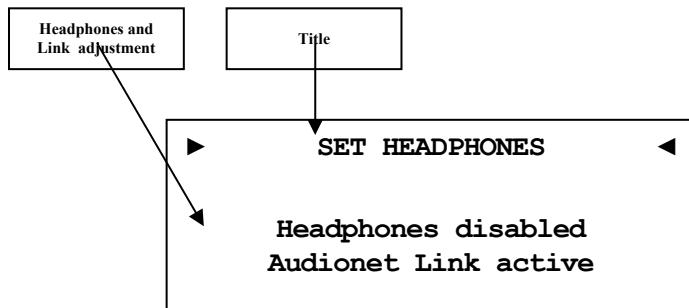
- Changes will only take effect if you push **OK** on your remote control or short push of **set** key on DNA 1 front panel.
- Within menus with more than one page the fastest way to reach the last entries is to press **up**. To reach, for example, entry **9 of 9**, open the main menu (marker **1 of 9**) and press **up** once instead of pressing **down** several times. Use the same procedure with keys **up / down** on the directional pad of the Audionet System Remote Control *Harmony Ultimate One*.

8.1 Overview device menu

Global Setup	Function
Headphones	Headphone mode
Display	Setup display brightness
Balance (Left/Right)	Setup volume balance left/right
Auto start	Setup auto start mode
By-Pass Channel	Setup channel for By-Pass mode
Phono Card	Setup your phono card according to your turn table
Power-Off Mode	Setup stand-by mode
Channel Name	Name the input channel (12-digits)
Volume Offset	Setup volume to offset differences between input channels
Network Setup	
Manage Network	Manage main network setup
Connection Type	Select type of connection
DHCP	Switch on/off DHCP
IP Address	Setup IP address for your DNA 1
IP Mask	Setup subnet mask
Gateway	Setup gateway IP address
DNS	Setup DNS IP address
RCP Port	Setup network port for software Audionet RCP
Wireless Setup	Setup Wi-Fi (SSID, crypt,...)
Factory Default Reset	
Reset all settings	
Reset network module	
Device Info	

8.2 Global setup

8.2.1 Headphones



**Headphones disabled
Audionet Link active** Headphones output **HEADPHONES** 4 is disabled. The Audionet Link output **Link OUT** 6 is switched on.

**Headphones active
Audionet Link active** Headphones output **HEADPHONES** 4 is active. The Audionet Link output **Link OUT** 6 is also active as long the unit is switched on.

**Headphones active
Audionet Link disabled** Headphones output **HEADPHONES** 4 is active, but the Audionet Link output **Link OUT** 6 is switched off. Use this option if you would like to switch off external power amplifiers, that are connected to the Audionet Link output **Link OUT** 6 automatically while you are using the headphones output.

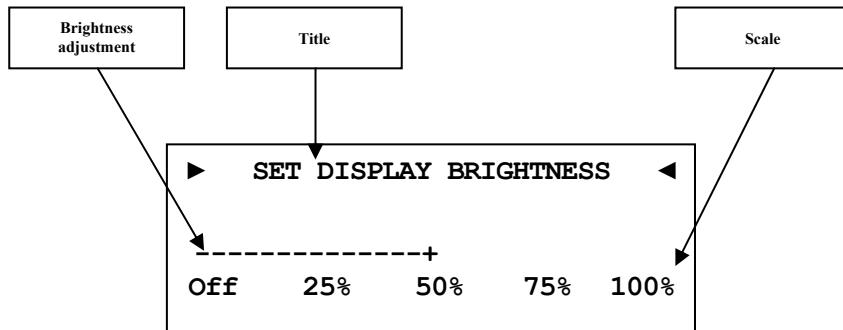


Tip

- If you connect your power amplifier to the Audionet Link output **LINK OUT** 6 of the DNA 1, it will be switched off automatically as soon as you select the headphones option **Headphones active, Audionet Link disabled**. Thus, you are able to enjoy music with your headphones and need not to worry about the amplifier. In case you deactivate the headphones output by selecting the option **Headphones disabled, Audionet Link active**, the power amplifier is switched on automatically via Audionet Link, so you playback music through your speakers again.

8.2.2 Display

Adjust the display brightness with the front panel keys or your system remote control.



Note

- Get to this option at anytime opening the **Global Setup** and navigating to **Display**. Use directional pad or **left / right** to select desired brightness.
- It is also possible to set display brightness with the software Audionet RCP.
- If the brightness is set to **Off** the display is only on during setup or volume adjustments. It switches off automatically several seconds after the last user entry.
- The DNA 1 activates the display saver automatically 12 minutes after last user entry/activity.
- During active display saver, the display shows only the number of the selected input channel and current volume level in the form of **An2 -47dB**. The display brightness is always reduced to 25%, and the location of the information text will change randomly every 12 seconds to prevent any burn-in effect of the display.
- The display saver is deactivated, and the display returns to its normal mode as soon as any user entry is detected
- The user cannot switch off the automatic display saver function!

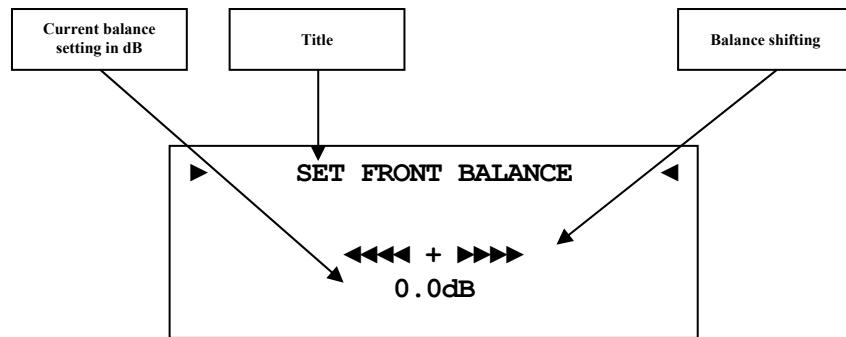


Important

- **Long-term usage of the display set to maximum brightness (setting 100%) may cause extended signs of wear resulting in a decay of contrast or brightness of individual dots in the display. Do not use the display with a brightness set higher than the factory default of 50% for a longer period of time!**

8.2.3 Balance Left/Right

Adjust the volume balance between left and right channel.



-9dB maximum volume displacement to left side

0dB no volume displacement

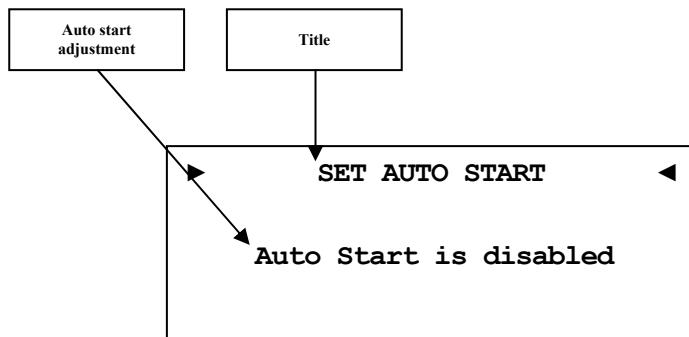
+9dB maximum volume displacement to right side



Note

- In normal operating mode the DNA 1 indicates a balance shift by the corresponding icon in the lower middle of the display. Thus you are able to see whether the balance was shifted at any time (see section: *"6.2.1 - Display" on page 21*).
- A balance shift is carried out internally by attenuating the corresponding channel, i.e. if the balance is shifted to the right, the level of the left channel is attenuated and vice versa.

8.2.4 Auto start

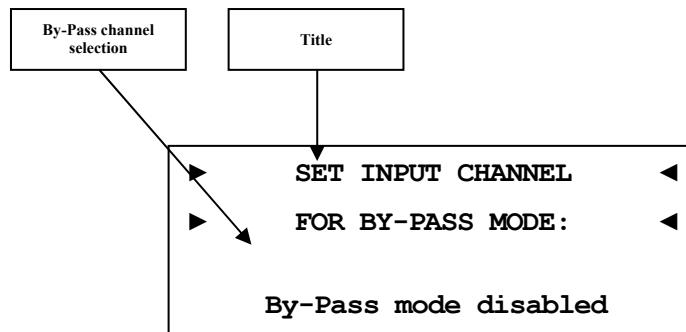


disabled The Auto Start function is disabled. After switching on the mains switch [10] on the back panel, the DNA 1 enters the stand-by mode. You have to use the **power** key on the front panel or **Power On** or **Power Toggle** keys on the Audionet System Remote Control to switch on the unit into normal operating mode.

active The Auto Start function is active. As soon as you connect the DNA 1 to mains (i.e. use the mains switch [10] on the back panel) the unit starts up automatically to normal operating mode. Use this setting for timer controlled operations.

8.2.5 By-Pass channel

Select the analog input channel you want to use for By-Pass mode.



The By-Pass Mode was primarily intended to integrate the overwhelming sound quality of the DNA 1 into an existing home cinema setup or to expand an existing excellent stereophonic system based on the DNA 1 to a complete home cinema setup without missing out on the qualities of the DNA 1. To realize this kind of setup, please proceed as follows:

Connect your home cinema preamplifier according to its user's manual.

1. Connect the output for the front channels Left and Right not to the power amplifier but to one of the free inputs of the DNA 1.
2. Use menu item By-Pass channel of the setup menu of the DNA 1 to select the input channel for By-Pass Mode you connected the outputs Left and Right of the home cinema preamplifier to.
3. Connect now all high quality 2-channel sources to the remaining inputs of the DNA 1.
4. Connect your DVD player to your home cinema preamplifier as usual.

Use the DNA 1 to listen to high quality 2-channel sources and streaming audio. If you would like to use your home cinema system activate the By-Pass Mode of the DNA 1 and use your home cinema preamplifier as usual.



Important

- Please read the complete section about the special function By-Pass Mode first before you use this function in order to prevent incorrect usage and possible damage to your audio system and/or hearing.
- By factory default no input channel is selected for the By-Pass Mode. Use this menu option to select desired input channel for the By-Pass Mode.

When the By-Pass Mode is active the volume control of the DNA 1 is bypassed. The DNA 1 passes through the input signal to the outputs and amplifiers with its **full** level.

Please use this setup option to select which of the four analog input channels of the DNA 1 is fed through to the outputs if By-Pass Mode is active.



Important

- **First, select the input channel used for By-Pass Mode, before you activate the By-Pass Mode for the first time.**

The special function By-Pass Mode of your DNA 1 is activated automatically if you switch to the input channel selected for By-Pass Mode in the setup option "**Set input channel for By-Pass Mode**". The signal at the input channel selected for By-Pass Mode operations is passed through the DNA 1 at a level of 0 dB (i.e. no change in volume level) to the outputs and amplifiers. As soon as you select a different input channel, the special function By-Pass Mode is switched off automatically.



Important

- **Please check the correct connection and setup before you use the By-Pass Mode for the first time. The input signal will be passed through to the outputs at full level!**

As soon as the By-Pass Mode is activated, the DNA 1 will ignore all control commands coming from the keys on the front panel or remote control (exceptions see below)!



Important

There are only two possibilities to disable the By-Pass Mode:

1. Select a different input channel. The DNA 1 switches to the newly selected input channel, resetting the volume to its prior level.
2. Push the **power** key on the front panel or the buttons **Power Toggle** or **Power Off** on the Audionet System Remote Control. The DNA 1 switches off to stand-by mode.

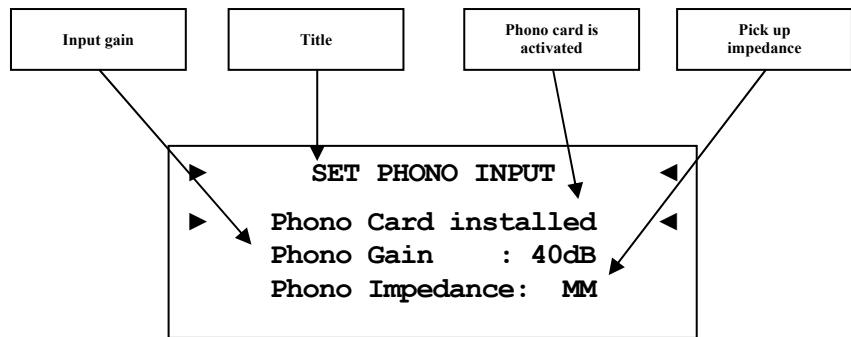


Note

- If you leave the By-Pass Mode by pushing the **power** key on the front panel, this mode will be saved, i.e. if you switch on the DNA 1 again, the unit will switch to the last saved input channel selection and thus into the By-Pass Mode.

8.2.6 Phono Card

Adjust your phono card.



Phono Card missing

Chose this adjustment, if **no** phono card is attached to your DNA 1

Phono Card installed
Phono Gain : 40-70dB
Phono Impedance: MM/MC

Chose this adjustment, if a phono card is build-in to your DNA 1 and further setup the other menu items

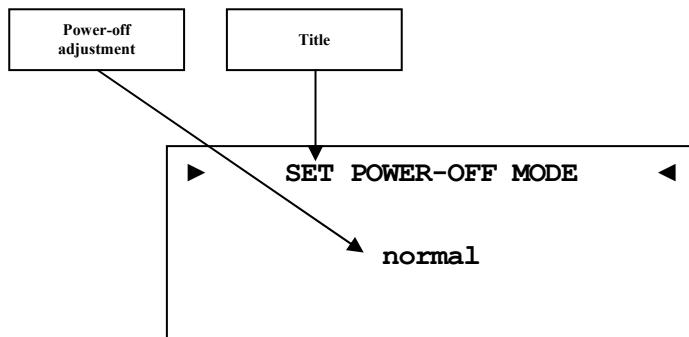
Setup input gain and impedance corresponding to your turntable pick up.



Note

- Check out technical information about your turntable and pick up system. Otherwise ask your local dealer for support.

8.2.7 Power-off mode

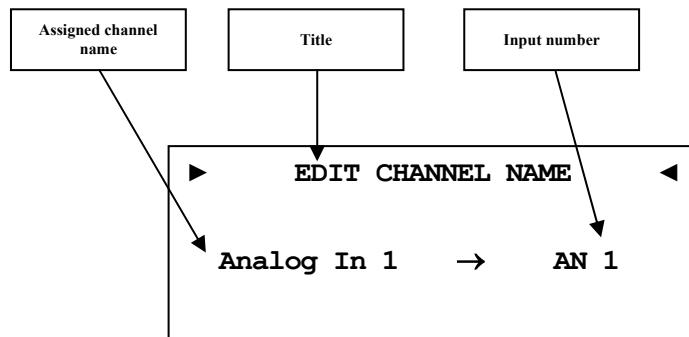


The DNA 1 differentiates between two power-off modes. Firstly the **normal** power-off mode and secondly the **Quick Start** mode.

The factory default setup is the **normal** mode, because of low power consumption in stand-by (less than 1W). If you use normal power mode, you cannot switch on with the software Audionet RCP.

With the **Quick Start** mode selected, the network interface remains activated, and the DNA 1 start up process is accelerated, because the network interface must not boot up. Furthermore you can use software Audionet RCP to start up. If you select **Quick Start** mode the power consumption is increased. Check out "*10.6 - Specifications*" on page 66.

8.2.8 Channel name



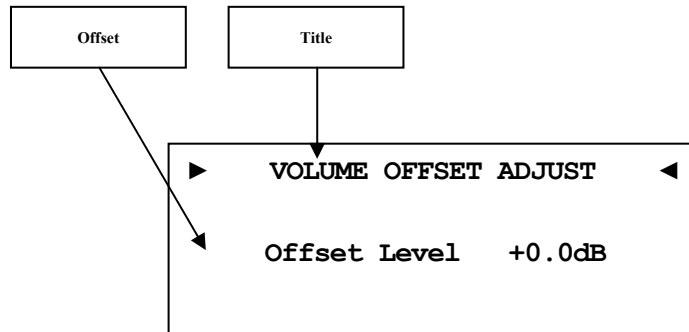
You can assign a fully user-definable name up to 12 characters in length to each of the thirteen input channels. The display shows the number of the currently selected input channel and the assigned channel name. The cursor marks the character you now may alter.



Note

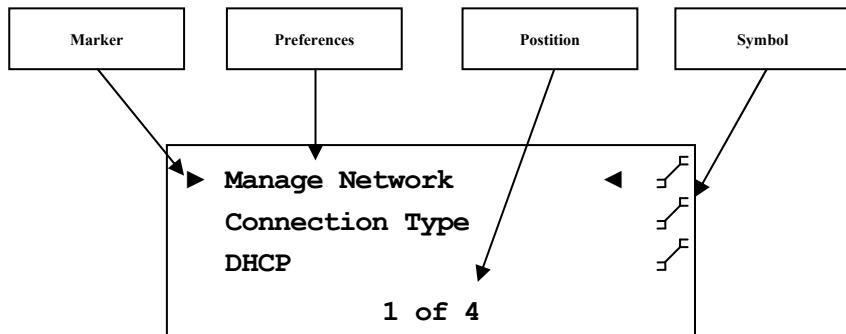
- For easier adjustment of the channel name use the software Audionet RCP (see user's manual RCP).

8.2.9 Volume offset



To offset differences between input devices, you can adjust the volume level for each channel in range from -9dB to +9dB.

8.3 Network setup



Your DNA 1 is set to receive DHCP* information from your network. If you connect your device to a wired network, it should be ready to use. For use of fixed IP address you may contact your network administrator to get the information you need to adjust. Use your system remote control *Harmony Ultimate One* to adjust your IP and Wi-Fi information. An adjustment with the front panel keys is possible, but setting numbers for an IP address is more comfortable with the numeric key pad. For letters for SSID and passphrases you can use the numeric key pad as well (SMS principle) or you navigate with the directional key pad. With **up / down** you change the letter and with **left / right** you move the cursor. Confirm your input with **OK** key. An example for network configuration can be found at the end of the section (see section: "**8.3.10 - Example for Network setup" on page 53**). Most network terms are defined in glossary (see section: "**10.1 - Glossary" on page 60**).

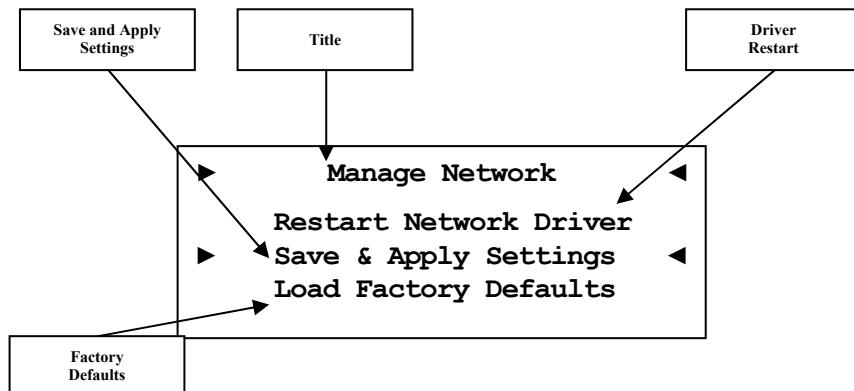


Note

- Wireless setup can also be done with the software Audionet RCP. For the time of configuration you need to connect your DNA 1 to the wired network. Later you may disconnect the cable for using a Wi-Fi connection.
- Every block of an address consists of three numbers. Sometimes the triplets are not written down in full length. If that is the case with an address you need for your network setup, then the leading zeros have been left out. You need to complete these addresses for use with your DNA 1 referring to the following example: e.g. 0.1.10.100 has to be completed to 000.001.010.100.

*see section: "**10.1 - Glossary" on page 60**

8.3.1 Manage Network

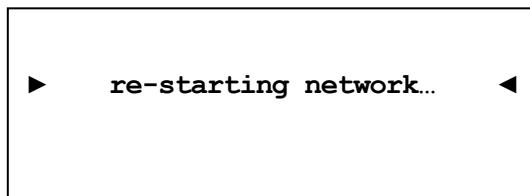


In this menu you find the basic setup for managing the network preferences of your DNA 1. The following explains the menu in detail.

8.3.1.1 Restart Network Driver

Sometimes it might be necessary to restart the network driver of the DNA 1. With this function you can restart the driver without having to switch the device off completely. The driver restarts with its current settings.

Select this menu entry and confirm your selection with **OK**. The DNA 1 issues the following message:



It takes about 30 seconds for the driver to be restarted. Then your Audionet device will be available in the network again.

8.3.1.2 Save & Apply Settings

This entry has to be selected every time you finished network configuration and want to save and apply the new values. Made changes to your network setup will be dismissed without saving and applying them unless you select this particular entry.

Select this menu entry and confirm your selection with **OK**. It takes about 30 seconds for the driver to be restarted. Then your Audionet device will be available in the network again.



Note

- You have to execute this entry if you want to save and apply your made changes. Otherwise your configuration will be dismissed!

8.3.1.3 Load Factory Defaults

With this function you can restore the factory settings of your DNA 1's network driver. The DNA 1 is factory-set to wired ethernet connection with DHCP activated. This way, if you connect your device to a wired network, it should be ready to use.

Select this menu entry and confirm your selection with **OK**. The factory default settings are now loaded.

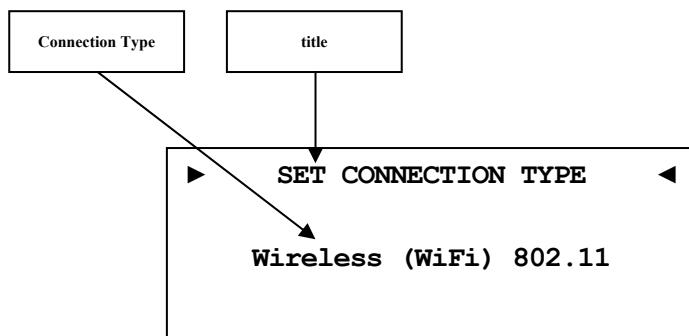
After successfully loading the factory defaults the cursor automatically marks the menu entry **Save & Apply Settings**. This entry has to be executed as described in section "*8.3.1.2 - Save & Apply Settings*" on page 43 to apply the factory defaults.



Note

- You have to execute menu entry **Save and Apply Settings** if you want to save and apply the factory default settings. Otherwise this configuration will be dismissed!
- If you accidentally selected this entry and the factory default settings are loaded, you are able to exit the menu with the key **Exit** of your Audionet System Remote Control *Harmony Ultimate One* or by pressing **set** longer than 2 seconds. This way the settings accidentally loaded will not be activated and your former settings will remain.

8.3.2 Connection Type

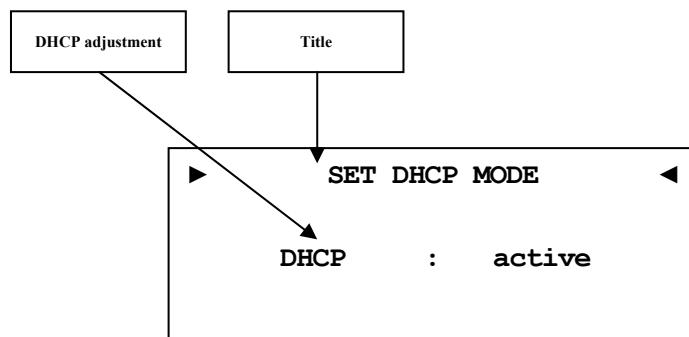


Wired Ethernet Factory setting. Your DNA 1 connects to a network via a connected network cable.

Wireless (WiFi) Your DNA 1 establishes a wireless connection via the included WLAN Antenna.

Only if **Wireless (WiFi) 802.11** is selected, the menu "*8.3.9 - Wireless setup*" on page 48 is available.

8.3.3 DHCP



disabled DHCP client mode is disabled

active Your DNA 1 will try to get information via DHCP.

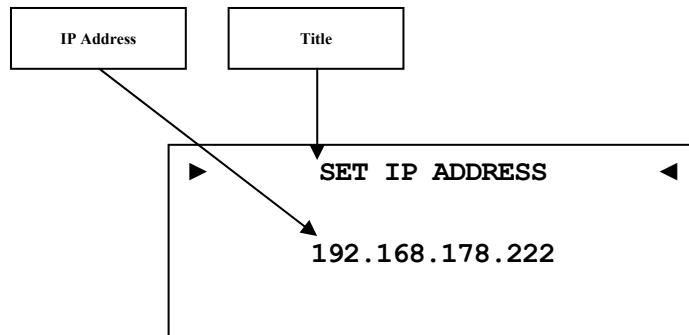
If the IP address is received from DHCP server, the following menu items must not be setup. Menu item IP address, IP mask, gateway and DNS are without effect and they are overwritten by DHCP information.



Tip

- Use directional pad on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.

8.3.4 IP Address



Setup your chosen IP address.

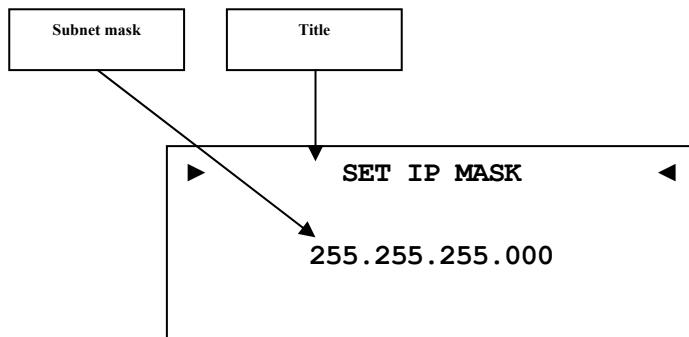
The used address type is IPv4 (e.g. 192.168.178.222).



Tip

- Use numeric key pad on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.

8.3.5 IP Mask



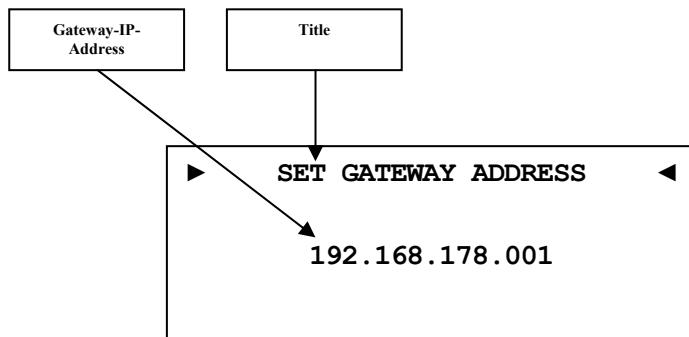
Setup your used subnet mask (e.g. 255.255.255.000).



Tip

- Use numeric key pad on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.

8.3.6 Gateway



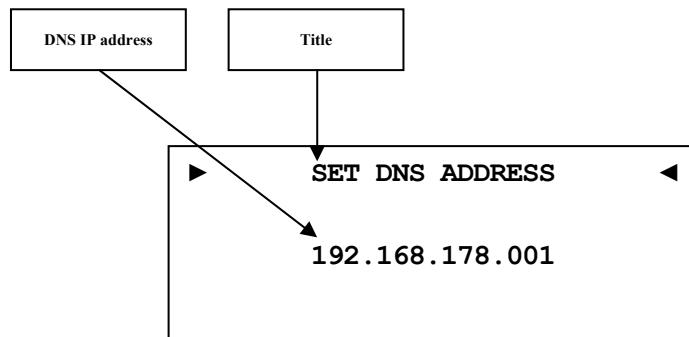
Setup your gateway IP address (e.g. 192.168.178.001).



Tip

- Use numeric key pad on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.
- The gateway address is mostly the same as the router IP address.

8.3.7 DNS



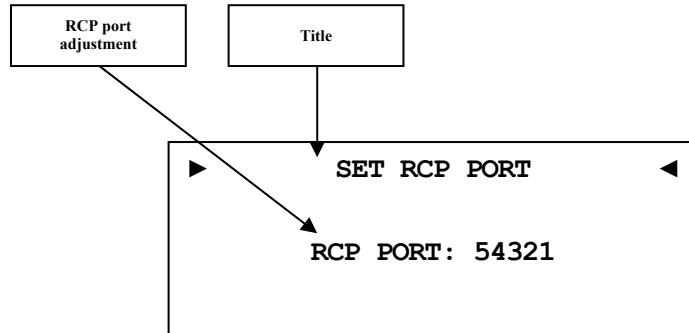
Setup your DNS IP address (e.g. 192.168.178.001).



Tip

- Use numeric key pad on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.
- The DNS IP address is mostly the same as the router IP address.

8.3.8 RCP port



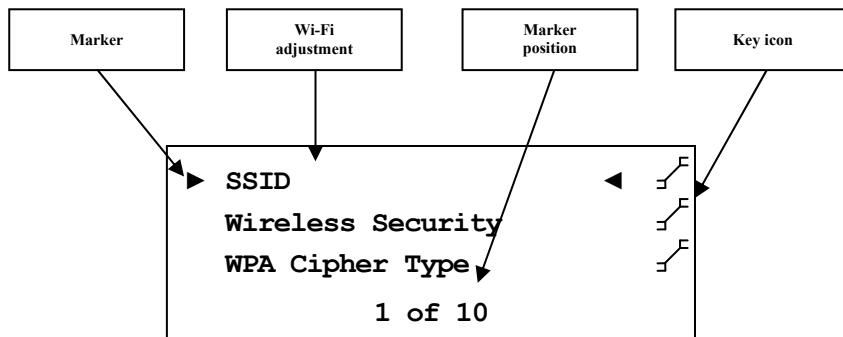
The communication port for software Audionet RCP and Android App aMM is set up here. This adjustment should only be done by professional users. Setup a value between 50000 to 59999. The default value has to be changed only if you have network communication problems. Ask your network administrator for support.



Tip

- Use directional pad **left / right** on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.

8.3.9 Wireless setup



All Wi-Fi adjustment has to be done manually.

You can find all your Wi-Fi adjustments in your router or access point. If you have no access to this information ask your network administrator.

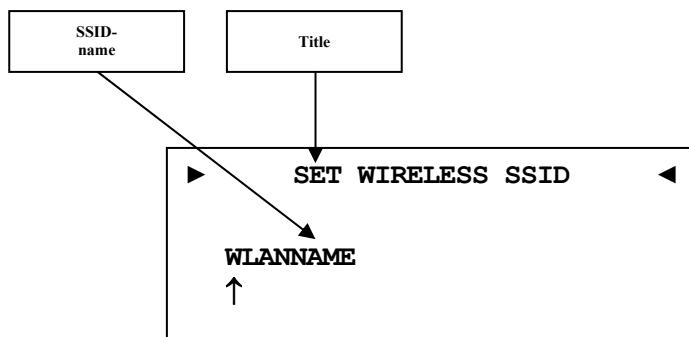


Note

- You can use software Audionet RCP to adjust Wi-Fi settings. A wired network connection is necessary. This connection can be removed after setup (see user's manual Audionet RCP).

8.3.9.1 SSID

Enter your Wi-Fi name. Attention on case sensitive input.

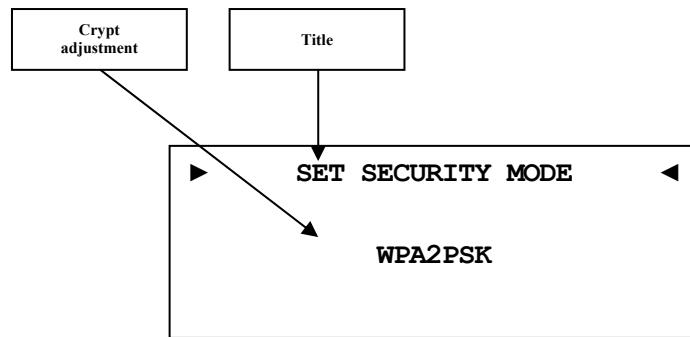


Note

- Use numeric key pad on your System Remote Control *Harmony Ultimate One* for letter input (SMS principle). You have to switch the cursor position forward manually. Use the **left / right** keys on directional key pad. Confirm the adjustment with the **OK** key.
- Use key **Cancel** to delete the selected character. In this case the key **Cancel** does not execute a step backward. Press **Exit** to leave the menu without saving.

8.3.9.2 Wireless security

Select your Wi-Fi crypt type. Take this information from your router.



None	no crypt type selected (not recommended).
WEP	Wired Equivalent Privacy, out-dated and unsecure security standard (not recommended).
WPAPSK	Wi-Fi Protected Access Pre-shared key was an transitional standard to replace WEP until the new WPA2 was defined (not recommended).
WPA2PSK	Wi-Fi Protected Access 2 Pre-shared key is the regular standard for Wi-Fi security (recommended).



Note

- Use directional pad **left / right** on your System Remote Control *Harmony Ultimate One*. Confirm everything with **OK** key.
- Wikipedia links to all security terms can be found in section "**10.2.1 - Wireless security**" on page 62.

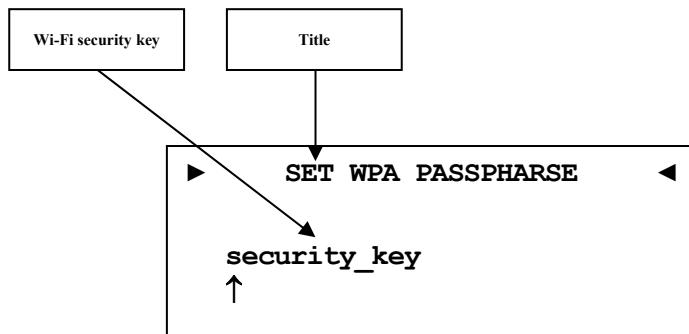


Tip

- In the preferences of some new routers / access points the used WPA2PSK crypt type might be called "WPA2PSK – Personal" or "WPA2 – Personal".

8.3.9.3 WPA pass phrase

Enter your WPA network key. Attention on case sensitive input. This phrase is only active with **WPAPSK** or **WPA2PSK**.

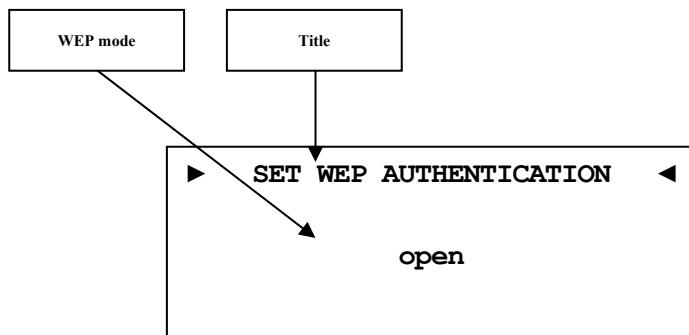


Note

- Use numeric key pad on your System Remote Control *Harmony Ultimate One* for letter input (SMS principle). You have to switch the cursor position forward manually. Use **left / right** keys on directional key pad. Confirm the adjustment with the **OK** key.
- Use key **Cancel** to delete the selected character. In this case the key **Cancel** does not execute a step backward. Press **Exit** to leave the menu without saving.
- The passphrase has to consist of at least 8 characters. Maximum length is 63 characters. The longer the passphrase the more secure the connection. For further information see the documentation of your router / access point.

8.3.9.4 WEP authentication

Select the WEP setup to your network.



open Open Authentication

shared Shared-Key-Authentication

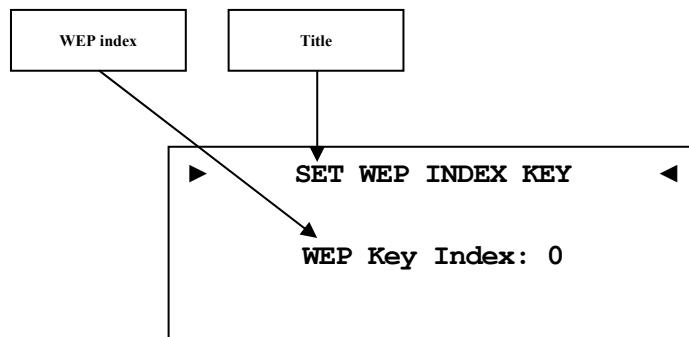


Note

- Chose authentication mode with directional pad. Left for **open** and right for **shared**. Confirm the adjustment with the **OK** key.
- We strongly recommend to use WPA2PSK standard to secure your Wi-Fi connection. WEP is not secure.

8.3.9.5 WEP key index

Select the Index Key 0-3

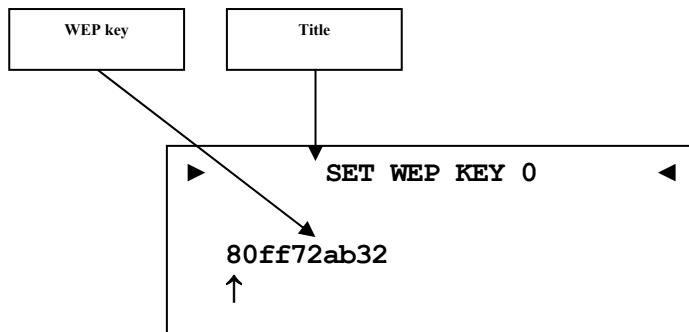


Note

- Select the WEP key index with your directional pad **left / right**. Confirm the adjustment with the **OK** key.

8.3.9.6 WEP key 0-3

Enter the WEP key phrase for key 0 - 3.



Note

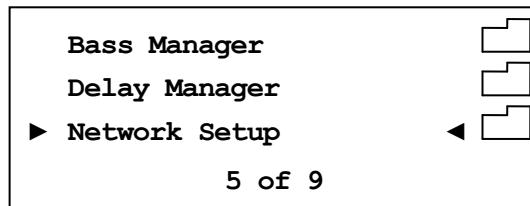
- Use numeric key pad on your system remote control *Harmony Ultimate One* for letter input (SMS principle). You have to switch the cursor position forward manually. Use **left** / **right** on directional key pad. Confirm the adjustment with **OK** key.
- Use key **Cancel** to delete the selected character. In this case the key **Cancel** does not execute a step backward. Press **Exit** to leave the menu without saving.
- A WEP key contains only numbers 0-9 and letters a-f.
- A WEP key consists of 10 or 26 digits.

8.3.10 Example for Network setup

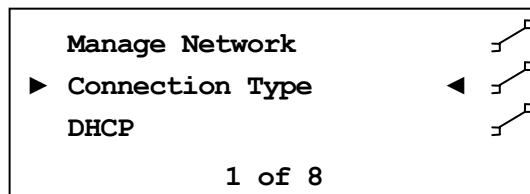
In this sample all adjustments are made with the System Remote Control. Compare the keys in this section "**7 - Audionet system remote control**" on page 28.

Choose the Device **DNA 1** (see section: "**7 - Audionet system remote control**" on page 28).

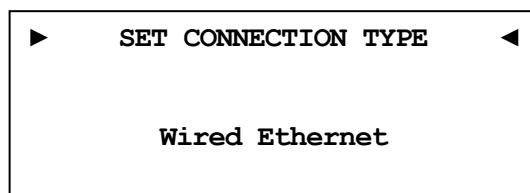
Open the system menu with the **Menu** key and mark the menu item **Network Setup** with the directional pad keys **up / down**. Confirm with **OK** key.



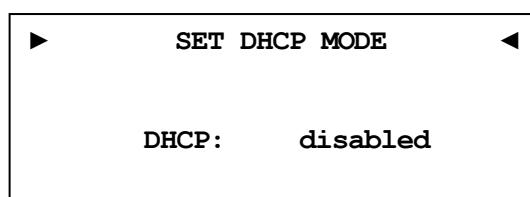
Switch to menu item **Connection Type**.



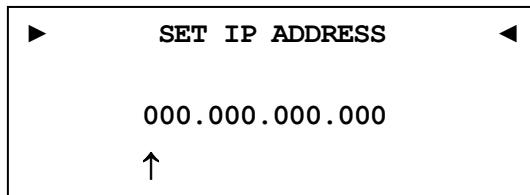
With the keys **left / right** of the directional pad choose your preferred connection type. Connection types **Wired Ethernet** and **Wireless (WiFi) 802.11** are available. Confirm with **OK**.



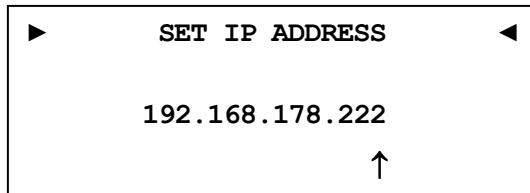
In this sample we suppose that you do not use DHCP in your network. Therefore we disable the DHCP function and set a fixed IP address. Open the menu item **DHCP**, press the left directional pad to select **disabled** and confirm with **OK** key. The DNA 1 saves the adjustment and switches to the Network Setup menu.



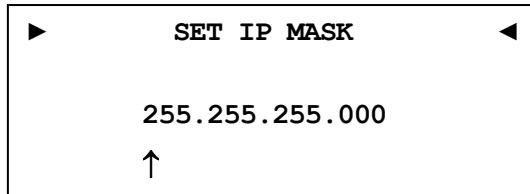
Now you have to enter the IP address you selected for your DNA 1. (e.g. 192.168.178.222 or 192.168.000.222 or 192.168.001.222).



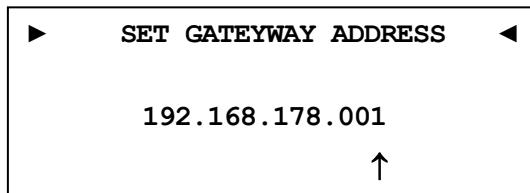
Insert the IP address directly with the numeric key pad in the lower section on your System Remote Control. Confirm with **OK** key. The DNA 1 applies the adjustment and switches to the Network Setup menu.



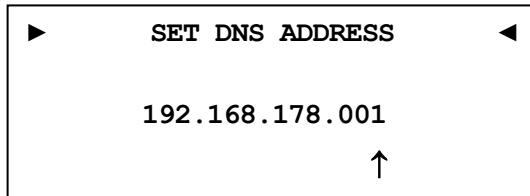
Select the menu item **IP Mask** and compare the adjustment with your data. The default value 255.255.255.000 should be the same with your network and could be confirmed with **OK**. Otherwise, enter your settings via numeric keypad.



The gateway in your network is probably the router, so you have to set the routers IP address as gateway address. Enter the address which is correct within your network and confirm.



Mostly the DNS address is the same like the routers IP address. If you use another DNS, enter the DNS IP address which is correct within your network configuration. You can find a DNS address through the internet. Use a search engine to find DNS server addresses for your location.



With this menu item the section fixed IP address is completed.

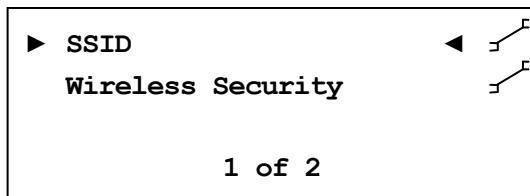
When you use your DNA 1 in a wired network, the network setup is completed. You can now save and apply your adjustments. If you want to use a Wi-Fi connection skip to paragraph "Wi-Fi adjustment".

Save network profile

Within the menu item **Manage Network** select **Save & Apply Settings** and confirm with **OK**. The new created network profile with all its settings is now saved and will immediately be applied.

Wi-Fi adjustment

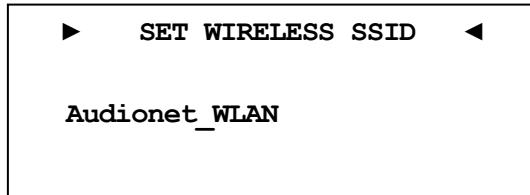
Within the menu **Manage Network** select entry **Connection Type**. Now change to **Wireless (WiFi) 802.11** and confirm with **OK**. Back in **Network Settings** the menu item **Wireless Setup** is now available. Now you have to enter the network name and network security key. Maybe you have to ask your network administrator or check out your router configuration.



Note

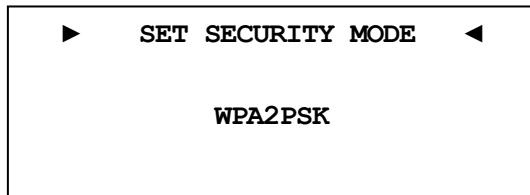
- In menu **Connection Type** the adjustment **Wireless (WiFi) 802.11** has to be made. Otherwise menu entry **Wireless Setup** is not visible.

Select **SSID** and set the network name.



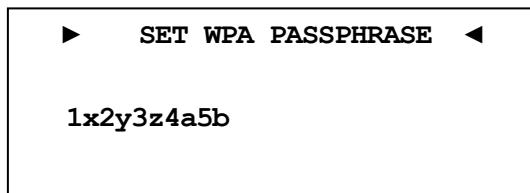
You have to be attentive to case sensitive input. Use the numeric key pad (SMS principle) for numbers and letters. With the **left** / **right** keys of the directional pad you switch to the next input position. The cursor does not step forward automatically. Confirm your input with **OK**.

Now select your security mode.



You can choose between **WEP**, **WPAPSK** and **WPA2PSK**. All settings have to be confirmed with **OK** key. Because the WEP mode is not secure, we only describe the setup of WPA security mode.

At last insert your Wi-Fi security key into menu item **WPA Pass Phrase**. Sample: **1x2y3z4a5b**



Confirm your input with **OK**. If all your network adjustments are correct now your settings can be saved.

Save network profile

Within the menu item **Manage Network** select **Save & Apply Settings** and confirm with **OK**. The new created network profile with all its settings is now saved and will immediately be applied.

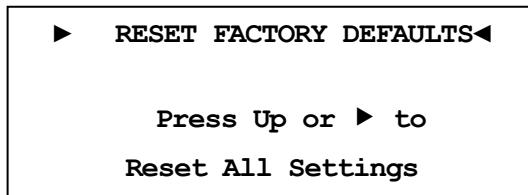
8.4 Reset Factory Defaults

The DNA 1 can be reset completely or network only to factory defaults. This can be done in the device menu under **Factory Default Reset**.

8.4.1 Reset All Settings

Open the menu of your DNA 1 by pressing the **Menu** button on your Audionet system remote control or by pressing the **set** -Button for a longer time at the front panel of the DNA 1. Select the menu item **Factory Default Reset** by using the **up / down** buttons. Confirm your selection by pressing the **OK** button or press the **set** button at the front panel shortly.

Now select the menu item **Reset All Settings**. Confirm your selection by pressing the **OK** button or press the **set** button at the front panel shortly.

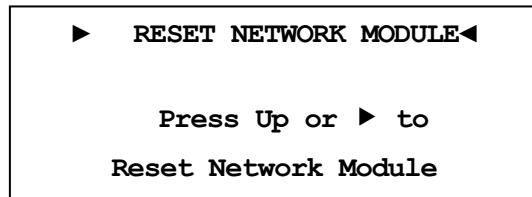


By pressing the **UP**-Button at the front panel or the **►**-Button on the remote control the reset procedure will start. After completing the reset procedure the DNA 1 will power down and then perform a restart.

8.4.2 Reset Network Module

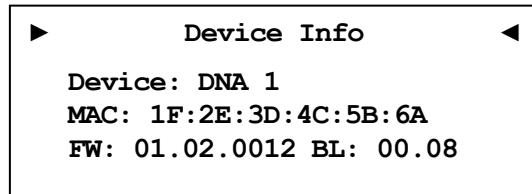
Open the menu of your DNA 1 by pressing the **Menu** button on your Audionet system remote control or by pressing the **set** -Button for a longer time at the front panel of the DNA 1. Select the menu item **Factory Default Reset** by using the **up / down** buttons. Confirm your selection by pressing the **OK** button or press the **set** button at the front panel shortly.

Now select the menu item **Reset Network Module**. Confirm your selection by pressing the **OK** button or press the **set** button at the front panel shortly.



By pressing the **UP**-Button at the front panel or the **►**-Button on the remote control the network reset procedure will start. After completing the network reset procedure the DNA 1 will power down and then perform a restart.

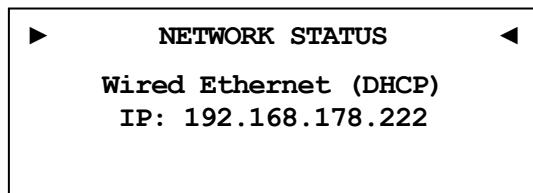
8.5 *Device info*



Here you will find information about your hardware and software.

- MAC address
- Firmware version
- Boot loader version

With key **left** / **right** or **OK** you can proceed to the second page. The second page contains the following information:



Connection Type

DHCP adjustment

IP Address of the device



Note

- Also take a look in the software Audionet RCP user's manual.

9 Security system

Your Audionet DNA 1 device and loudspeakers are protected by a complex protection circuitry. In case of a malfunction the display informs the user about the nature of the detected error in plain text:

Error message	Possible cause
Overload	short circuit or defective speaker
Overheating	ventilation slots covered
High Frequency	defective preamplifier-stage
DC Voltage	exceeding DC level at the output: defective preamplifier-stage or source unit
Power Failure	(temporary) breakdown of mains

Even after powering down the DNA 1s audio section, the error message still will be shown in the display. Press the **power** key on the front panel to get into the stand-by mode.



Important

- Remove cause of error prior to switching on the DNA 1 again!

10 Additional information

10.1 *Glossary*

- **Switch:**

A switch is the central connection unit in a computer network. Every device is directly or indirectly connected to the switch.

- **Router:**

A router is sharing out data through the network. Mostly the router device takes over other several features, such as Gateway-Server, DHCP-Server, DNS-Server, Switch, WLAN-Access Point, Modem, UPNP-AV and NAS via USB.

- **Access Point:**

An access point is an extension of a router. If a router is incapable of providing WLAN or its WLAN range is to be extended, an access point can be connected to one of the LAN ports of the router and extend its functions.

- **Gateway:**

A gateway connects computer or router to other networks (internet) and controls these connections.

- **Modem:**

A modem establishes a connection between LAN and WAN.

Nowadays all devices mentioned above are built in one device, which is called **router**.

- **IP-Address:**

The IP-Address identifies a device in the network. It is comparable to a postal address. An IP address can only be used once within a network!
IPv4 (192.168.0.1) common standard

IPv6 (2001:db8::1428:57ab) future standard

- **DNS-Server:**

A DNS-Server translates textual request to IP addresses and provides simple communication to the internet.

(e.g. www.audionet.de is translated to "194.000.201.201")

- **Proxy:**

Proxy-Server is mostly used in larger network facilities to guarantee more control and security to the network. Data transfer could be more efficient and speeded up. Home networks do not need a proxy.

- **LAN (Local Area Network):**

Localized network (home or company network)

- **Ethernet (cable):**

Ethernet is a technology that specifies hardware and software for wired data networks. An Ethernet connection offers a very good transmission rate and should be preferred.

- **Power LAN (mains supply):**

With power LAN technology you can connect Ethernet device through your mains supply. Transfer rate could be faster and more stable as a Wi-Fi connection. A disadvantage could be the harmonics, which are produced by such devices and pollute your mains supply.

- **WLAN (Wi-Fi):**

A Wi-Fi connection can be established very quickly, because you need no wire. The major disadvantages are the lower data transfer rate and the technical reliability. Physical structures or a large distance to the access point could harm the signal. We recommend wired connection.

- **WAN (Wide Area Network):**

Wide area network connections are used to connect to the internet.

- **Client:**

A client is a device which has no administrative or special jobs in a network (e.g. PC, Notebook, DNA 1, iPad, etc.).

- **Server:**

Servers provide services to clients or other servers. A server could have multiple services running on it.

- **NAS (Network Attached Storage):**

A NAS is a network storage device, which makes data (e.g. music, pictures, video and documents) easily accessible to all network devices.

- **UPnP-MS (Universal Plug and Play – Media Server):**

UPnP is a defined network standard to connect clients and servers. It is very easy to use, because you do not have to set up a lot. Only connect and play. UPnP media servers are the most common way to provide data through a home network. A media server could also be part of a NAS or router or it could run as program on a Computer.

- **SSID:**

The term SSID is the short form of service set identifier and describes what is generally known as the name of the network. A wireless network must have a name, so that client devices are able to find, identify and connect to the network.

- **Passphrase:**

Every wireless network should be protected by a passphrase. Client devices are only able to access a protected wireless network if they pass the passphrase check. The passphrase is used for authentication and identification and is thus an important element of network security.

10.2 *Link collection*



Note

- We are not responsible for Wikipedia links. If you are looking for scientifically proven information, have a look at referenced science books in wiki article.

10.2.1 Wireless security

WPA: http://en.wikipedia.org/wiki/Wi-Fi_Protected_Access

WPA2: http://en.wikipedia.org/wiki/Wi-Fi_Protected_Access#WPA2

PSK: http://en.wikipedia.org/wiki/Pre-shared_key

EAP (Radius): <http://en.wikipedia.org/wiki/RADIUS>
http://en.wikipedia.org/wiki/Extensible_Authentication_Protocol

WEP: http://en.wikipedia.org/wiki/Wired_Equivalent_Privacy

10.3 Error handling (FAQ)

Problem with internet radio streams:

A good, stable and fast connection to the internet, network is the most significant item. If your local conditions are fine, dropouts may be the problem of the radio stations broadcast. Switch to another station. If there is no problem it is perhaps a problem of the radio stations broadcast. Maybe it is overloaded.

Local problems could be an overload of your network, by downloads from the internet or data which is moved through your network as well as other streaming (e.g. video). Reduce or quit connections to receive internet radio without dropouts. A bad Wi-Fi connection could also cause dropouts.

No control:

Switch off your device through the power button on the front panel. Then switch off the mains circuit breaker on the back panel. If there is no action while you press the power button on the front, directly take the mains circuit breaker on the back panel. Wait 20 to 30 seconds until you switch on again. If there is still a problem, contact your local dealer for support.

Which control has no function: If the remote control does not react try the front panel keys, maybe it is only a problem of the remote control.

Remote control has no function:

Is the rechargeable battery charged?

Is the control light shining?

No – the battery is not charged!

Have you plugged in the power supply? Is your wall socket switchable?

Yes – Maybe the rechargeable battery is defect!

Ask your local dealer for support.

The software Audionet RCP does not establish a connection to DNA 1:

Restart your software and research for DNA 1 again.

If this is without success, switch off the DNA 1 (first stand-by, then mains circuit breaker) and wait 30 seconds. Startup your DNA 1 again and switch to NET input. Wait until **Booting** is no longer shown in the display. Now start your software Audionet RCP and search for DNA 1.

If there is still a problem, check out your network and network adjustment or ask your network administrator for support.

10.4 Security advice



Important

- Avoid packaging material, especially plastic bags, to come into children's hands.
- Store and operate the unit in a dry room at a reasonable room temperature.
- Avoid moisture or any liquid to get into the unit.
- Place the device with enough circulation of air.
- **Do not cover**, e.g. with a blanket.
- **Do not open** the case. Unauthorized opening will cause loss of guarantee.
- Prevent short circuit to the outputs.
- Switch off all devices if you plug any cable.
- Use a dry cloth for cleaning.
- If massive trouble on the mains power grid is to be expected. Disconnect all devices from mains to prevent electrical overload. Disconnect antenna and network connections as well.

We would like to wish you many exciting listening experiences with your new Audionet product!

If you still have any questions, don't hesitate to ask your competent Audionet dealer.

10.5 Factory defaults

Option	Adjustment
Global Setup	
Headphones	headphones disabled, Audionet Link active
Display	50%
Balance	+ 0 dB
Auto start	disabled
By-Pass Channel	not selected
Phono Card	missing Pickup type: MM Gain: 40 dB
Power-Off Mode	normal
Volume Offset	+ 0 dB
Channel Name	Digital In 1 .. 4 Optical In 1,2 Streaming In USB Audio In FM-Tuner Line In 1,2 Phono Balanced In
Network Setup	
Network Profile	default
DHCP	active
IP Address	192.168.178.222
IP Mask	255.255.255.000
Gateway	192.168.178.001
DNS	192.168.178.001
RCP Port	54321
Wireless Setup	
SSID	blank
Wireless Security	WPA2PSK
WPA Pass Phrase	blank
WEP Authentication	open
WEP Key Index	0
WEP Key 0	blank
WEP Key 1	blank
WEP Key 2	blank
WEP Key 3	blank

10.6 Specifications

Function	Streaming Client and analog/ digital Stereo-amplifier
Power output	2 x 110 Watt at 8 Ω 2 x 220 Watt at 4 Ω
Frequency response	Analog: 0 - 300.000 Hz (-3 dB) Digital: max. 96 kHz, depends on sample frequency
attenuation coefficient	typ. 1000 at 100 Hz
THD	k2 typ. -94 dB, k3 typ. -106 dB, @1 kHz, 25 W/4 Ω
THD+N	< -93 dB @1 kHz, 25 W/4 Ω
SNR	> 103 dB (A-rated)
capacitance	> 96.000 μ F
Input analog	3 pair RCA jack, gold plated, Teflon isolated 5-pin connector for EPS
Input digital	1 SPDIF RCA jack, gold plated, Teflon isolated 1 SPDIF TosLink 1 USB (A) (for USB stick, ext. hard disk etc) 1 USB (B) Mini, USB Audio 2.0 (asynchronous) 1 RJ45 Ethernet 10/100 BASE-T 1 SMA Connector WLAN
Input impedance	Line input 50 k Ω real
Output	2 pair speaker connector 4 mm jack, gold plated 1 pair (Pre Out) RCA jack, gold plated, Teflon isolated 1 Audionet Link, optical 1 headphone output (TSR connector, 6,3 mm, stereo) 1 Serial interface RS232
Mains	220 V...240 V, 50...60 Hz
Power consumption	< 1 W Stand-by 12W Quick Start max. 750 W
Dimensions	width 430 mm height 110 mm depth 365 mm depth over all 395 mm
Weight	15 kg

Design	<p>Front: brushed aluminum, 10 mm, black anodized, white printing or aluminum natural, 10 mm, anodized, black printing</p> <p>Display: red or blue</p> <p>Cover plate: aluminum, 6mm, black anodized</p> <p>Side plate: aluminum, 8mm, black anodized</p> <p>Chassis: sheet steel, black varnished</p>
Specials	<ul style="list-style-type: none"> - automatic mains phase detection - separated power supply for digital and analog section - fully DC coupled, no condenser in signal path - By-Pass mode (e.g. for integration to a home cinema system) - Audionet Link output to remote control Audionet devices - Switchable headphone output
Options	<ul style="list-style-type: none"> - Phono card for MM- und MC-pick up - Audionet System Remote Control

Errors and omissions excepted. Specifications and design are subject to changes without prior notice.

AUDIONET is a trademark of Idektron GmbH & Co KG

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